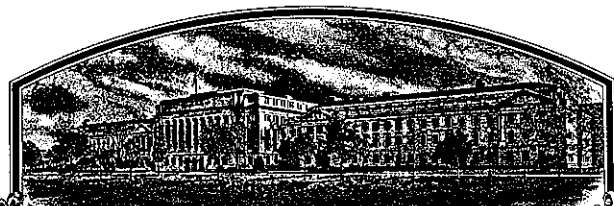


No.

8700032



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**Nickerson American Plant Breeders, Inc.**

Whereas, THERE HAS BEEN PRESENTED TO THE

**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS OWNED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'Lincoln'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D. C. this *31st* day of August in the year of our Lord one thousand nine hundred and eighty-eight.

Attest:

*Kenneth H. Evans*  
Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*Richard E. Lyng*  
Secretary of Agriculture



U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

## APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2428).

1. NAME OF APPLICANT(S) Nickerson American Plant Breeders Inc.		2. TEMPORARY DESIGNATION SW76-118C-180 or SW76-180		3. VARIETY NAME Lincoln	
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 5201 Johnson Drive, Mission, Kansas 66205		5. PHONE (Include area code) (913) 384-4940 KS (303) 532-3721 CO		FOR OFFICIAL USE ONLY VPPO NUMBER 8700032	
6. GENUS AND SPECIES NAME <u>Triticum aestivum</u>		7. FAMILY NAME (Botanical) Gramineae		FILING DATE <u>December 19, 1986</u> TIME <u>10<sup>00</sup></u> <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.	
8. KIND NAME Soft Red Winter Wheat		9. DATE OF DETERMINATION 1=1982 2=1985		FEE RECEIVED AMOUNT FOR FILING \$ <u>1800<sup>00</sup></u> DATE <u>November 24, 1986</u> AMOUNT FOR CERTIFICATE \$ <u>200<sup>00</sup></u> DATE <u>July 26, 1988</u>	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation				12. DATE OF INCORPORATION <u>January 19, 1983</u>	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware				13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS R.E. Heiner 5201 Johnson Drive Mission, KS 66205 (913) 384-4940 OR R.F. Bruns or C. Bruns P.O. Box 30 Berthoud, CO 80513 PHONE (Include area code): (303) 532-3721	
14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED					
a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)					
b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement.					
c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of Variety (Request form from Plant Variety Protection Office.)					
d. <input checked="" type="checkbox"/> Exhibit D, Additional Description of Variety.					
e. <input checked="" type="checkbox"/> Exhibit E, Statement of the Basis of Applicant's Ownership. Exhibit F. Quality and Statistical Data					
15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.) <input checked="" type="checkbox"/> Yes (If "Yes," answer items 16 and 17 below) <input type="checkbox"/> No					
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input checked="" type="checkbox"/> Foundation <input checked="" type="checkbox"/> Registered <input checked="" type="checkbox"/> Certified		
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? <input type="checkbox"/> Yes (If "Yes," give date) <input checked="" type="checkbox"/> No					
19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES? <input type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input checked="" type="checkbox"/> No					
20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable. The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF APPLICANT <u>Robert E Heiner</u>				DATE <u>17, NOV, 1986</u>	
SIGNATURE OF APPLICANT				DATE <u>1</u>	

**EXHIBIT A****ORIGIN AND BREEDING HISTORY OF LINCOLN**

**PARENTAGE:** Composite Cross

**DATE OF CROSS:** Spring, 1976

**BREEDING HISTORY:**

Thirty-three F5 lines and five soft wheat varieties were intermated in a partial diallel so that each entry was crossed to each other entry. Varieties included in this composite cross were, Skorospelka, Forte, V.Q.60, I30, I17, Olesen, CMS, Riley, Timwin, Monon, Stadler, Sel.I, Nugaines, Benhur, Arthur, Sturdy, Redcoat, IN5724-B3-5-P-8-2, Dual, Blueboy, IL59-859, INIA 66, Potomac, Ruler, Hart, Pioneer S76, and W-504. Then in the spring of 1977 the F1's of these crosses were intermated in a similar fashion. The resulting seed was bulked together and planted in the field in the fall of 1978. Selections were made in this F2 population and advanced by Single Seed Descent in the greenhouse through the winter of 1980. In 1981, a line was selected which became SW76-118C-180. It was tested as a Yield I in 1982, a Yield II in 1983, and a Yield III in 1984, 1985, and 1986. It was tested in the Uniform Eastern Soft Red Winter Wheat Nursery in 1985 and 1986 as SW76-180. There were 96 headrows grown in Berthoud, CO in 1985 and 85 were selected to produce Breeders Seed. Approximately 5,384 pounds of Breeder Seed was produced in 1985.

Lincoln is uniform and stable. Less than 1% of the plants were rogued from the foundation fields in 1986. Approximately 98% of these rogued plants were 15 to 23 centimeters taller than Lincoln. Less than 1% of these taller plants may be encountered in subsequent generations.

## EXHIBIT B

## NOVELTY STATEMENT

Lincoln is most similar to the soft red winter wheat Tyler, however it can be easily distinguished by the following morphological characteristics:

- Lincoln does not have collared seeds. Tyler's seeds have a conspicuous collar.
- Lincoln has a short glume length. Tyler has a long glume length, (see statistical data following page).

8700032

ANOVA TABLE FOR GLUME LENGTH  
LINCOLN VS. TYLER

<u>SOURCE</u>	<u>DF</u>	<u>SS</u>	<u>MS</u>
TOTAL	49	70.013	
VAR	1	62.051	62.05081
ERROR	48	7.962	0.16588

F-Test=374.079\*\*  
CV=0.584  
LSD(5%)=0.046

MEANS FOR EACH VARIETY

TYLER=9.380 mm's

LINCOLN=7.152 mm's

\*\*The probability that the difference in means of glume length  
are significantly different at the 1% and 5% levels.

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
LIVESTOCK, MEAT, GRAIN & SEED DIVISION  
BELTSVILLE, MARYLAND 20705

EXHIBIT C  
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY  
WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S) Nickerson American Plant Breeders Inc.	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 5201 Johnson Drive, Mission, Kansas 66205	PVPO NUMBER 8700032
	VARIETY NAME OR TEMPORARY DESIGNATION

Place the appropriate number that describes the varietal character of this variety in the boxes below.  
Place a zero in first box (e.g.  or ) when number is either 99 or less or 9 or less.

1. KIND:  
 1 = COMMON    2 = DURUM    3 = EMMER    4 = SPELT    5 = POLISH    6 = POULARD    7 = CLUB

2. TYPE:  
 1 = SPRING    2 = WINTER    3 = OTHER (Specify) \_\_\_\_\_  1 = SOFT    3 = OTHER (Specify) \_\_\_\_\_  
2 = HARD \_\_\_\_\_  
 1 = WHITE    2 = RED    3 = OTHER (Specify) \_\_\_\_\_

3. SEASON - NUMBER OF DAYS FROM  Jan. 1st TO:  LAST FLOWERING

4. MATURITY (50% Flowering):  
 NO. OF DAYS EARLIER THAN .....  1 = ARTHUR    2 = SCOUT    3 = CHRIS  
.....  NO. OF DAYS LATER THAN .....  4 = LEMHI    5 = NUGAINES    6 = LEEDS    7 = Caldwell

5. PLANT HEIGHT (From soil level to top of head):  
 CM. HIGH  
.....  CM. TALLER THAN .....   
 CM. SHORTER THAN .....  1 = ARTHUR    2 = SCOUT    3 = CHRIS  
4 = LEMHI    5 = NUGAINES    6 = LEEDS    7 = Tyler

6. PLANT COLOR AT BOOTING (See reverse):  
 1 = YELLOW GREEN    2 = GREEN <sup>dark</sup>    3 = BLUE GREEN

7. ANTHUR COLOR:  
 1 = YELLOW    2 = PURPLE

8. STEM:  
 Anthocyanin: 1 = ABSENT    2 = PRESENT  
 Hairiness of last internode of rachis: 1 = ABSENT    2 = PRESENT  
 NO. OF NODES (Originating from node above ground)

2. Waxy bloom: 1 = ABSENT    2 = PRESENT  
1 Internodes: 1 = HOLLOW    2 = SOLID  
 CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:  
 Anthocyanin: 1 = ABSENT    2 = PRESENT  
 Hairiness: 1 = ABSENT    2 = PRESENT

10. LEAF:  
 Flag leaf at booting stage: 1 = ERECT    2 = RECURVED  
3 = OTHER (Specify) \_\_\_\_\_  Flag leaf: 1 = NOT TWISTED    2 = TWISTED  
 Hairs of first leaf sheath: 1 = ABSENT    2 = PRESENT  
 Waxy bloom of flag leaf sheath: 1 = ABSENT    2 = PRESENT  
 MM. LEAF WIDTH (First leaf below flag leaf)  CM. LEAF LENGTH (First leaf below flag leaf):

8700032

FORM GR-470-6 (REVERSE)

'Lincoln'

## 11. HEAD:

☐ 3 Density: 1 = LAX 2 = DENSE 3 = MIDDENSE ☐ 1 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE  
 4 = OTHER (Specify) \_\_\_\_\_  
☐ 3 Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED  
☐ 1 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED  
 5 = BROWN 6 = BLACK 7 = OTHER (Specify): \_\_\_\_\_  
☐ 8. ☐ 3 CM. LENGTH ☐ 1 ☐ 0 MM. WIDTH

## 12. GLUMES AT MATURITY:

☐ 1 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 3 = LONG (CA. 9 mm.) ☐ 2 Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.)  
 3 = WIDE (CA. 4 mm.)

☐ 2 Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED  
 4 = SQUARE 5 = ELEVATED 6 = APICULATE ☐ 1 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

## 13. COLEOPTILE COLOR:

☐ 1 1 = WHITE 2 = RED 3 = PURPLE

## 14. SEEDLING ANTHOCYANIN:

☐ 2 1 = ABSENT 2 = PRESENT

## 15. JUVENILE PLANT GROWTH HABIT:

☐ 2 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

## 16. SEED:

☐ 1-2 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL ☐ 1 Check: 1 = ROUNDED 2 = ANGULAR  
☐ 2 Brush: 1 = SHORT 2 = midlong 3 = LONG ☐ 1 Brush: 1 = NOT COLLARED 2 = COLLARED  
☐ --- Phenol reaction (See instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN  
 4 = BROWN 5 = BLACK  
☐ 3 Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) \_\_\_\_\_  
☐ 5. ☐ 6 MM. LENGTH ☐ 3. ☐ 4 MM. WIDTH ☐ 3 ☐ 7 GM. PER 1000 SEEDS

## 17. SEED CREASE:

☐ 1 Width: 1 = 60% OR LESS OF KERNEL 'WINOKA'  
 2 = 80% OR LESS OF KERNEL 'CHRIS'  
 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'  
☐ 1 Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT'  
 2 = 35% OR LESS OF KERNEL 'CHRIS'  
 3 = 50% OR LESS OF KERNEL 'LEMHI'

## 18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3 = Moderately Susceptible 4 = Moderately Resistant

☐ 1 STEM RUST (Races) ☐ 2 LEAF RUST (Races) R to UN5 ☐ 0 STRIPE RUST (Races) ☐ 0 LOOSE SMUT  
☐ 0 POWDERY MILDEW ☐ 0 BUNT ☐ 4 OTHER (Specify) BYDV & Rhizoctonia

## 19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3 = Moderately Susceptible 4 = Moderately Resistant

☐ 0 SAWFLY ☐ 0 APHID (Bydv.) ☐ 0 GREEN BUG ☐ 0 CEREAL LEAF BEETLE  
☐ 0 OTHER (Specify) \_\_\_\_\_ HESSIAN FLY } ☐ 0 GP ☐ 0 A ☐ 0 B ☐ 0 C  
 RACES: } ☐ 1 D ☐ 1 E ☐ 0 F ☐ 0 G

## 20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Tyler	Seed size	Tyler
Leaf size	Tyler	Seed shape	Tyler
Leaf color	Tyler	Coleoptile elongation	Tyler
Leaf carriage	Tyler	Seedling pigmentation	Tyler

## INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

- (a) L.W. Briggie and L.P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.
- (b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

## EXHIBIT D.

## ADDITIONAL DESCRIPTION OF LINCOLN

Lincoln is a soft red winter wheat bred and developed by Nickerson American Plant Breeders Inc. It is high yielding, early, strong strawed, and exhibits good milling and baking quality.

Lincoln provides excellent protection to Rhizoctonia, soil borne mosaic virus, and very good protection to wheat spindle streak mosaic virus. It provides good protection to leaf rust, septoria leaf blotch, and tan spot. Lincoln also provides fair protection to powdery mildew, barley yellow dwarf virus, and take-all. It has poor protection to stem rust and Hessian fly.

Lincoln is intermediate height (98 cm's) with a semi-erect juvenile plant growth habit. Plant color at boot is dark green with an erect twisted flag leaf. Auricles are hairy and do express antho-cyanin in some environments. Waxy bloom is present on the stem and flag leaf sheath. It has hollow internodes and four solid nodes. Spike is awnletted and tapering, glumes are glabrous with obtuse beaks and oblique shoulders. Heads are white at maturity. Kernels are oval to ovate in shape with a large embryo and round cheeks. Seed crease width is narrow and depth is shallow. The brush occupies a large area on the kernel with mid-long hairs.

Lincoln's area of adaptation includes the northern, central and eastern soft wheat areas.



**EXHIBIT E****STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP**

Nickerson American Plant Breeders Inc. is the applicant for protection in this case being:

- a) The incorporated business (registered in Delaware) for and within which regular employees have bred the named variety.
- b) The proprietary owner and intending commercial user of the variety.

## EXHIBIT F

## QUALITY AND STATISTICAL DATA

## LINCOLN

QUALITY DATA . . . . .	1-2
DISEASE RESISTANCE . . . . .	3-4-5
LINCOLN'S TRIAL SUMMARY INFORMATION . . . . .	6-7

AGRIPO WHEAT  
SOFT RED WINTER WHEAT QUALITY

YEAR: 1984

## OVERLOCATION VIII'S

PAGE 1

LAB NO.	VARIETY OR LINE	LOC-CODE	MILLING										BAKING										SCORES
			TEST WT		WH PROT		BRK FLR		TOT FLR		FL PROT		C. Diam		T.O		MILL		BAKE				
"Lincoln"																							
7740	SW76-119C190	MO-9213	60.0	10	10.3	3	33.4	4	64.1	4	3.1	3	31.0	10	7	27-C	26-A						
7850	SW76-119C190	GM-9213	58.3	8	11.6	9	33.7	7	67.0	5	9.8	9	23.0	10	7	29-C	26-A						
7989	SW76-119C190	JM-9213	59.2	9	10.2	3	36.3	5	65.6	4	9.4	9	31.0	10	6	27-C	25-B						
7926	SW76-119C190	BD-9213	56.2	6	11.7	9	29.3	7	65.7	4	10.2	9	30.0	10	7	28-C	26-A						
7659	SW76-119C190	FA-9213	59.7	8	9.3	9	40.5	7	63.3	4	8.0	3	20.0	10	9	29-C	29-A						
7203	SW76-119C190	BK-9213	60.5	10	11.5	9	34.3	4	64.3	4	9.3	9	30.0	10	8	27-C	27-A						
7493	SW76-119C190	MI-9213	60.9	10	10.7	9	32.3	3	64.0	4	9.3	3	37.0	3	8	28-C	26-A						
AVERAGE			59.1	9	10.8	9	36.7	5	63.1	4	9.2	9	23.7	10	7	27-C	26-A						

GRADES: A=EXCELLENT B=GOOD C=ACCEPTABLE D=QUESTIONABLE F=UNACCEPTABLE  
 R-RATINGS: 9-10=EXCELLENT 8=GOOD 7=ACCEPTABLE 5-6=QUESTIONABLE 1-4=UNACCEPTABLE

North American Plant Breeders  
SOFT RED WINTER WHEAT QUALITY

YEAR: 1983

OVERALL-LOCATION SUMMARY

PAGE 2

VARIETY OR LINE	CODE	MILLING						BAKING						SCORES		
		TEST WT	WH PROT	BRK FLR	TOT FLR	FL PROT	C. Diam	T.O	MILL	BAKE						
		lb/Bu	R	%	R	%	R	%	R	%	R	mm	R	R		
"Lincoln"																
SW76-118C180	BI 7122	56.2	6	9.7	9	39.7	7	69.2	7	8.7	9	87.0	9	6	29-C	24-B
SW76-118C180	BK 7122	60.3	10	10.0	9	39.0	7	68.3	6	8.8	9	89.0	10	4	32-B	23-B
SW76-118C180	CH 7122	56.6	6	8.4	7	40.4	7	68.4	6	7.5	5	89.0	10	7	26-C	22-B
AVERAGE		57.7	7	9.4	9	39.7	7	68.6	6	8.3	9	88.3	9	6	29-C	24-B
CALDWELL	BI 7101	55.9	5	10.0	9	43.3	9	68.9	6	8.8	9	88.5	9	7	29-C	25-B
CALDWELL	BK 7101	59.3	9	10.6	9	43.5	9	69.9	7	9.0	9	88.0	9	9	34-B	27-A
CALDWELL	CH 7101	55.6	5	7.6	5	49.3	10	70.7	8	6.3	3	90.0	10	8	28-C	21-C
AVERAGE		56.9	6	9.4	9	45.4	10	69.6	7	8.0	9	88.8	9	8	32-B	26-A
COKER 916	BI 7104	58.1	8	10.9	9	34.3	4	67.3	5	9.5	9	87.0	9	5	26-C	23-B
COKER 916	BK 7104	60.4	10	11.2	9	36.1	5	68.7	6	9.9	9	84.0	7	8	30-C	24-B
COKER 916	CH 7104	56.3	6	8.3	7	43.5	9	68.3	6	7.1	5	87.5	9	7	28-C	21-C
AVERAGE		58.3	8	10.1	9	38.0	6	68.1	6	8.8	9	86.2	8	7	29-C	24-B

GRADES:

A-EXCELLENT

B-GOOD

C-ACCEPTABLE

D-QUESTIONABLE

F-UNACCEPTABLE

RATINGS:

9-10=EXCELLENT

8=GOOD

7=ACCEPTABLE

5-6=QUESTIONABLE

1-4=UNACCEPTABLE

GRADES: A-EXCELLENT B-GOOD C-ACCEPTABLE D-QUESTIONABLE F-UNACCEPTABLE  
R-RATINGS: 9-10=EXCELLENT 8=GOOD 7=ACCEPTABLE 5-6=QUESTIONABLE 1-4=UNACCEPTABLE

DISEASE RESISTANCE1986 OH, IN, MS, TN, AR

	<u>Sept</u>	<u>Leaf Sev.</u>	<u>Rust Res.</u>	<u>Powdery Mildew</u>
Lincoln	6.1	2.0	5.0	0
Twain	6.8	2.5	2.0	0
Tyler	6.8	8.0	5.0	0
Caldwell	6.5	3.0	3.0	0
Hart	8.0	8.0	5.0	2.5

1985 OH, AR, IN

	<u>Sept</u>	<u>Leaf Sev.</u>	<u>Rust Res.</u>	<u>Powdery Mildew</u>	<u>SBMV</u>
Lincoln	7.0	2.5	3.5	3.0	2.5
Twain	6.0	1.5	1.5	2.0	1.5
Tyler	6.0	6.5	5.0	1.0	3.5
Caldwell	7.0	2.5	3.5	1.0	6.5
Hart	8.0	6.5	5.0	5.0	2.0

1-9 Damage scale; 1=Excellent, 9=Poor

BARLEY YELLOW DWARF  
PAV ISOLATE

---

<u>VARIETY</u>	<u>AVE</u> <u>1986</u>	<u>AVE</u> <u>1985</u>	<u><math>\bar{x}</math></u>	(1984)
Lincoln	6.5	5.0	5.8	7.3
Twain	6.0	6.0	6.0	5.0
Magnum	6.2	7.2	6.7	7.0
Hunter	6.8	5.7	6.3	6.7
Blazer	5.8	7.2	6.5	5.7
Caldwell	6.5	7.0	6.5	7.0
Coker 762	8.5	8.5	8.5	

1-9 Damage Scale; 1=Excellent, 9=Poor

# Rhizoctonia Ratings for Commercial Varieties

Variety	# Years	<sup>a</sup> Ave.	Variety	# Years	<sup>a</sup> Ave.
Twain	4	3.8	Roy	3	7.1
Lincoln	2	4.2	Auburn	4	7.2
Florida 302	2	4.8	Becker	3	7.2
McNair 1003	4	5.1	Florida 301	2	7.2
Coker 983	2	5.4	Stacey	2	7.3
Coker 762	4	5.5	Blazer	5	7.5
Compton	3	5.5	Coker 797	4	7.8
Hart	5	5.7	Pioneer 2550	5	7.9
Cardinal	3	5.9	Pioneer 2551	3	7.9
Hillsdale	2	6.0	Adena	4	8.0
Saluda	2	6.0	Coker 747	4	8.0
Coker 916	4	6.2	Magnum	5	8.0
Roland	5	6.3	Pike	4	8.0
Tyler	5	6.3	Fillmore	2	8.3
Wheeler	4	6.3	Doublecrop	3	8.4
Arthur 71	5	6.7	Caldwell	4	8.6
Orion	4	6.7			
Hunter	4	6.9			
Coker 68-15	2	6.9			
Southern Belle	4	6.9			

1-9 Damage scale; 1 = Excellent, 9 = Poor

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## AGRIPO WHEAT

YEARS: 83, 84, 85      SOFT RED WINTER WHEAT TRIAL SUMMARY      No. LOCATIONS: 16  
 OVER LOCATIONS-OVER YEARS  
 AUGUST 29, 1985

NURSERY TYPE: NAFB  
 REGION: NORTHERN, DELTA  
 STATE: IN, OH, AR, IL, MI, MO  
 WATER MANAGEMENT: CONTINUOUS CROPPING  
 YIELD LEVEL: ALL YIELD LEVELS

VARIETY OR LINE	DATA SOURCE	OVERALL YIELD			OVERALL TESTWT			1983 YIELD			1984 YIELD			1985 YIELD		
		Bu/Ac	Bu/Ac	No.	lb/Bu	lb/Bu	No.	Bu/Ac	Bu/Ac	No.	Bu/Ac	Bu/Ac	No.	Bu/Ac	Bu/Ac	No.
		AF180 CALDW	LOC		AF180 CALDW	LOC		AF180 CALDW	LOC		AF180 CALDW	LOC		AF180 CALDW	LOC	
A= SW78-118C180 'Lincoln'																
B= CALDWELL																
NAFB		* 69.9	69.8	16	58.6	57.9	16	70.1	66.9	5	73.5	74.8	6	65.2	63.4	5
NORTH		* 75.3	72.9	13	59.1	59.7	13	78.5	73.2	4	74.6	74.9	5	73.0	70.1	4
DELTA		46.2	50.8	3	56.4	54.6	3	36.3	41.4	1	69.5	74.4	1	33.8	36.5	1
CON		* 69.9	69.8	16	58.6	57.9	16	70.1	66.9	5	73.5	74.8	6	65.2	63.4	5
IN		79.7	79.4	4	58.5	59.1	4	86.5	82.7	2	92.0	93.2	1	53.8	58.9	1
OH		77.6	74.7	4	59.8	59.9	4	66.3	65.7	1	70.4	69.5	1	86.9	82.2	2
AR		46.2	50.8	3	56.4	54.6	3	36.3	41.4	1	68.5	74.4	1	33.8	36.5	1
IL		81.2	73.3	2	57.3	57.3	2	74.8	62.0	1	87.7	84.6	1	.0	.0	0
MI		61.7	55.8	2	60.8	59.4	2	.0	.0	0	59.0	54.6	1	64.4	57.0	1
MO		63.7	73.4	1	58.3	57.4	1	.0	.0	0	63.7	73.4	1	.0	.0	0
OVERALL		* 69.9	69.8	16	58.6	57.9	16	70.1	66.9	5	73.5	74.8	6	65.2	63.4	5

\*\* YIELD OF VARIETY A, IS GREATER THAN VARIETY B, AT 6 OR MORE LOCATIONS.



YEARS: 85      AGRIPRO WHEAT      Page 7.

SOFT RED WINTER WHEAT TRIAL SUMMARY  
OVER LOCATIONS-OVER YEARS  
AUGUST 29, 1985      No. LOCATIONS: 12

NURSERY TYPE: USDA  
REGION: EASTERN, NORTHERN, SOUTHERN, DELTA  
STATE: VA, IN, OH, SC, MD, MO, KY  
WATER MANAGEMENT: CONTINUOUS CROPPING  
YIELD LEVEL: ALL YIELD LEVELS

VARIETY OR LINE	DATA SOURCE	OVERALL YIELD			OVERALL TESTWT			1985 YIELD		
		Bu/Ac	Bu/Ac	NO.	lb/Bu	lb/Bu	NO.	Bu/Ac	Bu/Ac	NO.
		AP180	SALUD	LOC	AP180	SALUD	LOC	AP180	SALUD	LOC
A= SW78-118C180 "Lincoln"										
B= SALUDA	USDA	65.7	66.6	12	57.4	59.7	11	65.7	66.6	12
	EAST	63.0	63.4	2	58.0	59.3	2	63.0	63.4	2
	NORTH	* 75.9	75.3	6	59.7	60.4	5	* 75.9	75.3	6
	SOUTH	46.3	56.8	3	56.2	59.5	3	46.3	56.8	3
	DELTA	55.8	50.6	1	53.5	51.7	1	55.8	50.6	1
	CON	65.7	66.6	12	57.4	59.7	11	65.7	66.6	12
	VA	47.2	39.5	1	58.0	59.5	1	47.2	39.5	1
	IN	81.0	82.1	2	60.9	62.2	1	81.0	82.1	2
	OH	91.0	83.5	2	61.0	61.5	2	91.0	83.5	2
	SC	46.3	56.8	3	56.2	59.5	3	46.3	56.8	3
	MD	90.8	89.2	1	58.0	57.0	1	90.8	89.2	1
	MO	51.6	66.3	1	53.4	56.9	1	51.6	66.3	1
	KY	57.8	52.6	2	55.5	55.9	2	57.8	52.6	2
OVERALL		65.7	66.6	12	57.4	59.7	11	65.7	66.6	12

\*= YIELD OF VARIETY A, IS GREATER THAN VARIETY B, AT 6 OR MORE LOCATIONS.